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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,983	01/30/2001	Junichi Hayashi	35.C15073	9440

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EXAMINER

PATEL, JAYANTI K

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 03/17/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/771,983

Applicant(s)

HAYASHI ET AL.

Examiner

Jayanti K. Patel

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 24-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: _____   |

**DETAILED ACTION**

***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-14 and 24-36 drawn to an image processing method for extracting image information including watermark information, classified in class 382, subclass 100.
  - II. Claims 15-23 drawn to a method for inputting image data using block division and block selection process, classified in class 382, subclass 173.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as sub-combinations disclosed as usable together in a single combination. The sub-combinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility for processing an image by extracting image information using registration signal; Invention II has separate utility for processing an image by inputting image data by block division, block selection and information extraction judgment. See MPEP 806.05(d).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Brian L. Klock (Reg. # 36,570) on March 10, 2004, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-14 and 24-36. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-23 are withdrawn from further

Art Unit: 2625

consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

#### ***Priority***

6. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been placed of record in the file.

#### ***Drawings***

7. The drawings filed on January 30, 2001 have been approved.

#### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 2625

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-9, 11-14 and 24-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads (US 6,122,403) in view of Cox et al. (US 6,154,571).

Regarding claim 1, Rhoads discloses a digital watermarking system for linking computer system using the information in data objects comprising the steps of:

a first information extraction step of extracting information including a registration signal (column 10, lines 21-43), including a registration signal used to correct the geometrical distortion of an image.

Rhoads discloses the use of second information (figure 24, elements 970 and 972) without specific details regarding the determination step of employing the results obtained at the first step.

In the same field of endeavor, however, Cox discloses a robust watermarking system comprising a determination step for employing the results obtained at the first step to determine whether second information is to be extracted (column 8, lines 52-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the second step for extracting information as taught by Cox in the watermarking system of Rhoads because Cox provides Rhoads

Art Unit: 2625

with a robust watermarking system that provides much better control over image fidelity and is adaptable so that the model of the human visual system and the techniques used for handling attacks on the image information can be changed later without having to change the detector.

As to claim 2, Rhoads discloses the first information and the second information are embedded in the image as invisible or less visible electronic watermarks (column 71, lines 1-35).

As to claim 3, Rhoads disclose the division step for dividing the image and selection step for selecting the block (figures 21A and 21B).

As to claims 4-5, Rhoads discloses the first information indicates the image includes a specific image (column 29, line 61 through column 30, line 60).

As to claims 6-8, Rhoads discloses the first and second information being added to components of the image that are easily discerned by a human's eyes to identify paper currency, securities or a copyrighted image (column 59, lines 10-65). Additionally, such watermarking systems are routinely used for paper currency and copyrighted material as being also disclosed by Cox (see column 1, lines 8-60) and other prior art made of record in the instant application.

As to claim 9, Rhoads discloses a determination step of determining whether the specific image is included; an image process is performed based on the image (column 20, lines 6-44).

As to claims 11-14, Rhoads discloses the first information is smaller than the second information, requires shorter time than the first and present in the greater area (figure 18, elements 852 and 864, figure 27A and figure 42).

As to claims 24-34 and 36, claims 24-34 and 36 recite substantially very similar limitations as that of claims 1-9 and 11-14 and are similarly analyzed.

11. Claims 10 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads (US 6,122,403) in view of Cox et al. (US 6,154,571) as applied to claims 1-9, 11-14 and 24-34, 36 and further in view of Horigane (US 6,334,721).

Regarding claims 10 and 35, while Rhoads discloses the use of printers and scanners (column 10, lines 5-50) without specific details regarding the method of claim 1 being performed by printer driver.

In the same field of endeavor, however, Horigane discloses a printing system wherein the method of claim 1 is being performed by a printed driver (column 5, lines 10-45 and column 8, lines 41-58).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the printer driver as taught by Horigane in the watermarking system of Rhoads because the printing system of Horigane enables application data to be printed out at any printer even if machine-readable code is embedded in the application data.

***Other prior art cited***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rhoads (US 6,311,214) discloses a system for linking computers based on optical sensing of digital data (figure 2).

Thorpe (US 5,917,996) discloses a system for printing tamper-resistant electronic information.

Conley (US 5,689,626) discloses a system for linking a file to a document.

Weinberger et al. (US 5,644,682) discloses a system for incorporating indicia into a document generated by a computer application (figure 2, element 43).

Lee et al. ("Adaptive Digital Image Watermarking Using Variable Size of Blocks in Frequency Domain", IEEE 1999, TENCON, pages 702-705) discloses an adaptive digital watermarking system considering the human visual system.

Fridrich ("Image Watermarking for Tamper Detection", IEEE 1998, pages 404-408) discloses digital image watermarking technique (page 408).

Fridrich ("Robust Bit Extraction from Images", IEEE 1999, pages 536-540) discloses a robust watermark extraction system.

#### ***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayanti K. Patel whose telephone number is (703) 308-7728. The examiner can normally be reached on Monday-Friday (7:00-4:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JKP

March 12, 2004

A handwritten signature in black ink, appearing to read 'Jayanti K. Patel', with a stylized flourish at the end.

Jayanti K. Patel  
Primary Examiner